

Amendment and Response

Applicant: John Kossett

Serial No.: 10/826,647

Filed: April 16, 2004

Docket No.: R344.118.101

Title: DUAL PRESS-FIT WRAP SPRING CLUTCH

REMARKS

The following remarks are made in response to the Office Action mailed June 30, 2005. Claims 1-20 were rejected. With this Response, claims 1-3 and 11 have been amended. Claims 1-20 remain pending in the application and are presented for reconsideration and allowance.

Claim Rejections under 35 U.S.C. § 112

The Examiner rejected claims 1-20 under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention, pointing to confusion cause by the use of “hub and “output hub.”

Applicant has now amended claims 1 and 11 such that “output hub” is now referred to as “output member,” which is consistent with use in the specification (see, for example, page 3, line 17). In addition, antecedent basis is now corrected in claims 2 and 3 to refer to “the shoulder” and “the hub,” each first introduced in claim 1, on which they both depend.

In view of the above, claims 1-20 are believed to be in form for allowance. Therefore, Applicant respectfully requests that rejections to these claims under 35 U.S.C. § 112, second paragraph, be reconsidered, and that the rejections be removed and these claims be allowed.

Claim Rejections under 35 U.S.C. § 103

The Examiner, as understood, rejected claims 1-20 under 35 U.S.C. § 103(a) for being unpatentable over the Wahlstedt U.S. Patent No. 4,263,995 in view of the Kossett U.S. Patent No. 4,638,899 as an obvious combination.

Claim 1 specifies a wrap spring clutch with a drive shaft, an output member, a wrap spring, a bushing with first and second portions, and a control ring. The output member is configured with a first groove into which a first wrap end of the wrap spring is press fit. The control ring is mounted over the drive shaft and fixed to the second portion of the bushing thereby defining a second groove, which press fits the second wrap end. This unique creation of the second groove by mounting the control ring on the second portion of the bushing to retain the second wrap end is neither taught nor suggested by the art of record.

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Conversely, cited art such as the Wahlstedt '995 and Kossett '889 references, rely upon at least one end of a spring having a spring toe that is typically configured to extend into an opening in a control ring. Not only is the performance of such a design different than the present invention, but assembling such a clutch mechanism is also quite different. In a design where the spring toe is provided, one end of the wrap spring can be press fit into a groove in an end piece (such as groove 44 in end piece 16 of Kossett '889), and then this can be assembled over a shaft. The provided spring toe may then be fed through the opening in the control ring after all the other parts are assembled in place.

Even if the assumption of Examiner is taken as true for the sake of argument, and the press fit of the wrap spring into a groove in an end piece is inferred to both sides rather than the single side that is actually shown, it would not be practicable to press this other end into a groove on the other side of the wrap spring once the clutch is assembled. In this way, it is not obvious or practical to simply mirror the press fit side of the wrap spring to the other side as well. If the wrap spring is press fit on both sides it cannot be assembled over the shaft. If it is press fit only on one side and then assembled over the shaft, the other side cannot be practically pressed into a groove provided on the other side. The advantage for assembly of the inventive clutch is discussed on page 7, line 15-17.

In fact, even if it is assumed that the wrap spring is somehow press fit into a groove on both sides rather than the single side that is actually shown again (putting aside the issue that it cannot be practically assembled as such), this still would not teach or suggest the features of claim 1. Instead, claim 1 specifies that a control ring is mounted over the drive shaft and fixed to the second portion of the bushing thereby defining a second groove. Furthermore, claim 1 has been amended to clarify that the mounting of the control ring over the second portion of the bushing press fits the second end of the wrap spring in order to retain it. No such retaining configuration is taught or suggested in the art of record.

In addition, a specific configuration of the relative heights of the wrap spring and bushing surface are indicated in claim 5. These respective height configurations are not taught or suggested in the art of record. The control ring is specified to press against the wrap spring

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surface thereby creating the press fit over the second wrap in claim 6. This configuration is not taught or suggested in any of the art of record.

Similar to the arguments above regarding claim 1, claim 11 specifies control means mounted over the drive shaft for providing a second groove into which the second wrap end is press fit. The disclosed structure corresponding to the control means is as discussed above for claim 1. In this way, no such retaining configuration for the second wrap end is taught or suggested in the art of record.

Since independent claims 1 and 11 are not taught or suggested in the art of record, they and dependant claims 2-10 and 12-20 are also in condition for allowance. Therefore, Applicant respectfully requests reconsideration and withdrawal of the 35 U.S.C. § 103(a) rejection to claims 1-20, and request allowance of these claims.

CONCLUSION

In view of the above, Applicant respectfully submits that pending claims 1-20 are in form for allowance and are not taught or suggested by the cited references. Therefore, reconsideration and withdrawal of the rejections and allowance of claims 1-20 is respectfully requested.

No fees are required under 37 C.F.R. 1.16(b)(c). However, if such fees are required, the Patent Office is hereby authorized to charge Deposit Account No. 50-0471.

The Examiner is invited to contact the Applicant's representative at the below-listed telephone numbers to facilitate prosecution of this application.

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CERTIFICATE UNDER 37 C.F.R. 1.8: The undersigned hereby certifies that this paper or papers, as described herein, are being deposited in the United States Postal Service, as first class mail, in an envelope address to: Mail Stop Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450 on this 29th day of September, 2005.

By 

Name: Paul P. Kempf